CLAIMS

1. A system for controlling a hazardous fluid distribution facility having a perimeter with an entrance, an electrical power input, a source of gas under pressure, a principal fluid storage tank, a tank valve pneumatically actuable to provide fluid flow communication with said principal fluid storage tank and having a closed state in the absence of said actuation, a fluid pump in fluid flow communication with said tank valve, and a motor coupled to drive said fluid pump when enabled, comprising:

a start switch connectible with said electrical power input and actuable to provide a system start output;

an electrically controllable valve coupled in gas flow relationship with said source of gas under pressure and responsive to an on-state input to apply gas under pressure from said source at a valve output, to effect the pneumatic actuation of said tank valve and effecting said tank valve closed state by venting said gas applied thereto in the absence of said on-state input;

a gas pressure control monitor responsive to the pressure of said gas from said valve output, having a system enable condition when said gas pressure is at an enable value and having an off condition when said gas pressure is lower than said enable value;

a control network responsive to said start switch system start output to provide said on-state input to said electrically controlled valve, and responsive in the presence of said gas pressure monitor enable condition and said on-state input to maintain said on-state input.

2. The system of claim 1 further comprising:

a power switch coupled with said electrical power input and actuable to provide an electrical power output and an off condition;

said start switch is coupled for response to said electrical power output;

said control network is responsive to said power switch off condition to cause said electrically controllable valve to effect said tank valve closed state.

3. The system of claim 1 including:

a first cuing device perceptible in response to a first input representing a system down condition; and

said control network is responsive to said gas pressure control monitor off condition in the presence of said system start input to provide said first input.

4. The system of claim 1 in which said control network is responsive to said gas pressure control monitor system enable condition to enable said motor.

5. The system of claim 1 further comprising:

a second cuing device perceptible in response to a second input representing a system ok condition; and

said control network is responsive to said gas pressure control monitor system enable condition to provide said second input;

6. The system of claim 1 in which:

said gas pressure control monitor is effective to derive said system enable condition in the presence of a monitor enable condition; and

said control network is responsive to said system start output to derive said monitor enable condition.

7. The system of claim 6 in which:

said control network comprises a receiver, responsive to a transmitted off-state signal to effect removal of said on-state input to said electrically controlled valve; and

including a first transmitter having a transmitter switch manually actuable to effect transmission of said off-state signal to said control network receiver.

8. The system of claim 7 in which said first transmitter is located adjacent said distribution facility perimeter entrance.

9. The system of claim 7 in which:

said first transmitter is configured to periodically transmit a first coded transmitter supervisory status signal; and

said control network receiver is configured to periodically poll for detecting the presence of said first coded transmitter supervisory status signal and is responsive in the absence of a polled said first coded transmitter status signal to provide a first device fault signal.

10. The system of claim 9 further comprising:

a third cuing device perceptible in response to a third input representing a faulty transmitter; and

said control network is responsive in the absence of a polled said first coded transmitter supervisory status signal to derive said third input.

11. The system of claim 2 in which said power switch is a key actuated switch.

12. The system of claim 7 further comprising a second transmitter located adjacent said principal fluid storage tank and having a transmitter switch manually actuable to effect transmission of said off-state signal to said control network receiver.

13. The system of claim 9 further comprising:

a second transmitter remotely spaced from said first transmitter having a transmitter switch manually actuable to effect transmission of said off-state signal to said control network receiver and being configured to periodically transmit a second coded transmitter supervisory status signal; and

said control network receiver is configured to periodically poll for detecting the presence of said second coded transmitter supervisory status signal and is responsive in the absence of a polled said second coded transmitter supervisory status signal to provide a second device fault signal.

14. The system of claim 1 further comprising:

a source pressure monitor responsive to the pressure of gas at said source of gas under pressure, when enabled and having a fault condition when said gas pressure at said source of gas under pressure is at a value below a source threshold value;

a fourth cuing device perceptible in response to a fourth input representing a low gas pressure condition; and

said control network is responsive to said source pressure monitor fault condition to derive said fourth input.

15. A method for controlling a hazardous fluid distribution facility having a perimeter with an entrance, an electrical power input, a source of gas under pressure, a principal fluid storage tank, a tank valve pneumatically actuable to provide fluid flow communication with said principal storage tank and having a closed state in the absence of said actuation, a fluid pump in fluid flow communication with said tank valve, a motor coupled to drive said fluid pump when enabled and actuated, a fluid transfer station and a fill valve in fluid flow communication with said pump and connectable when pneumatically enabled and actuated in fluid delivery communication with a distribution tank, said fill valve having a closed state when pneumatically disenabled, comprising the steps of:

providing a power switch coupled with said electrical power input, said power switch being actuable to provide an electrical power output and an off condition;

providing a start switch coupled with said power switch and actuable to respond to said electrical power output to provide an on-state input;

providing an electrically controllable valve coupled in gas flow relationship between said source of gas under pressure and a gas conduit assembly extending to said tank valve and said fill valve, responsive to an on-state input to convey gas under pressure from said source into said gas conduit assembly and effecting a venting of said gas conduit assembly in the absence of said on-state input;

providing a gas pressure monitor responsive, when enabled, to the pressure of gas at said conduit assembly, having a system enable condition when said gas pressure is at an enable value and having an off condition when said gas pressure is lower than said enable value;

actuating said power switch to provide said electrical power output;

actuating said start switch to derive said on-state input and to enable said gas pressure monitor for an interval sufficient to derive said system enable condition effecting the pneumatic actuation of said tank valve and enablment of said fill valve and said motor;

actuating said motor and said fill valve and delivering fluid from said principal storage tank to said distribution tank; and

then actuating said power switch to provide said off condition to effect said venting of said gas conduit assembly at said electrically controllable valve to in turn, effect said closed state at said tank valve, effect said disenablement of said fill valve, and effect disenablement of said gas pressure monitor and said motor.

16. The method of claim 15 in which:

said power switch is provided as a switch which is actuated with a system key;

said distribution tank is provided as being mounted upon the frame of a truck the motor of which is enabled with a vehicle key; and

said vehicle key and said system key are provided as being coupled to a secure key retainer.

17. The method of claim 15 further comprising the steps of:

providing a receiver which is responsive to a transmitted off-state signal to effect said venting of said gas conduit assembly at said electrically controlled valve to, in turn, effect said closed state at said tank valve, effect said disenablement of said fill valve, and effect disenablement of said gas pressure monitor and said motor;

providing a transmitter having a transmitter switch manually actuable to effect transmission of said off-state signal to said receiver; and

manually actuating said transmitter switch on the occasion of a perceived emergency associated with said principal fluid storage tank.

18. The method of claim 17 in which said transmitter is provided adjacent said facility perimeter entrance.

19. The method of claim 17 in which said transmitter is provided adjacent said principal fluid storage tank.

20. The method of claim 17 in which said transmitter is provided as a portable, hand held transmitter.

21. The method of claim 17 further comprising the steps of:

periodically monitoring the status of said transmitter with said receiver; and

providing a perceptible fault cue when monitoring determines said status to represent a defective transmitter.

22. A method for controlling a hazardous fluid distribution facility having a perimeter with an entrance, an electrical power input, a source of gas under pressure, a principal storage tank, a fluid tank valve pneumatically actuable to provide fluid flow communication with said principal tank and having a closed state preventing said fluid flow communication in the absence of said pneumatic actuation, a vapor tank valve pneumatically actuable to provide vapor communication with said principal storage tank and having a closed state preventing said vapor communication in the absence of said pneumatic actuation, a fluid shut-off valve actuable when pneumatically enabled to provide fluid flow communication with said principal storage tank through said fluid tank valve and having a closed state when pneumatically disenabled, a vapor shut-off valve actuable when pneumatically enabled to provide vapor communication with said principal storage tank through said vapor tank valve and having a closed state when pneumatically disenabled, a fluid transfer station adjacent said fluid shut-off valve and said vapor shut-off valve for receiving said combustible fluid from the pumped fluid output of the supply tank of a delivery vehicle located adjacent said fluid transfer station, said vehicle supply tank having a vent input, comprising the steps of:

providing a power switch in electrical communication with said electrical power input, said power switch being actuable to provide an electrical power output and an off condition;

providing a start switch in electrical communication with said power switch and actuable to respond to said electrical power output to provide a system start output;

providing an electrically controllable valve coupled in gas flow relationship between said source of gas under pressure and a gas conduit assembly extending to said fluid tank valve, said vapor tank valve, said fluid shut-off valve and said vapor shut-off valve, responsive to an on-state input to convey gas under pressure from said source into said gas conduit assembly and effecting a venting of said gas conduit assembly in the absence of said on-state input;

providing a gas pressure monitor responsive when enabled to the pressure of said gas at said conduit assembly, having a system enable condition when said gas pressure is at an enable value and having an off condition when said gas pressure is lower than said enable value;

actuating said power switch to provide said electrical power output;

actuating said start switch to derive said on-state output and to enable said gas pressure monitor for an interval sufficient to derive said system enable condition effecting the pneumatic actuation of said fluid tank valve and said vapor tank valve, and the enablement of said fluid shut-off valve and said vapor shut-off valve;

coupling said delivery vehicle supply tank pumped fluid output in fluid transfer relationship with said fluid shut-off valve;

coupling said delivery vehicle supply tank vent input with said vapor tank valve;

actuating said enabled fluid shut-off valve and said enabled vapor shut-off valve;

providing combustible fluid from said supply tank to said principal storage tank;

actuating said power switch to provide said off condition to effect said venting of said gas conduit assembly at said electrically controllable valve to, in turn, derive said closed state at said fluid tank valve and said vapor tank valve and to pneumatically disenable said fluid shut-off valve and said vapor shut-off valve;

decoupling said delivery vehicle supply tank pumped fluid output from said fluid shut-off valve; and decoupling said delivery vehicle supply tank vent input from said vapor shut-off valve.

23. The method of claim 22 in which:

said power switch is provided as a switch which is actuated with a system key;

said delivery vehicle is enabled with a vehicle key; and

said vehicle key and said system key are provided as being coupled to a secure key retainer.

24. The method of claim 22 further comprising the steps of:

providing a receiver which is responsive to a transmitted off-state signal to effect said venting of said gas conduit assembly at said electrically controlled valve to, in turn, derive said closed state at said fluid tank valve and said vapor tank valve and pneumatically disenable said fluid shut-off valve and said vapor shut-off valve to cause them to assume said closed state;

providing a transmitter having a transmitter switch manually actuable to effect transmission of said off-state signal to said receiver; and

manually actuating said transmitter switch on the occasion of a perceived emergency associated with said principal fluid storage tank

25. The method of claim 24 in which said transmitter is provided adjacent said facility perimeter entrance.

26. The method of claim 24 in which said transmitter is provided adjacent said principal fluid storage tank.

27. The method of claim 24 in which said transmitter is provided as a portable, hand held transmitter.

28. The method of claim 24 further comprising the steps of:

periodically monitoring the status of said transmitter with said receiver; and providing a perceptible fault cue when monitoring determines said status to represent a defective transmitter.